## ABSTRACT OF THE DISCLOSURE

The improvement of the yields of semiconductor devices is intended. In a method for manufacturing a semiconductor device, it has forming a resin enclosure for block-molding a plurality of semiconductor chips by placing a plurality of semiconductor chips inside a cavity of a molding die along with a substrate and then injecting a resin from a first side to a second side of a main surface of the substrate, the plurality of semiconductor chips being mounted on the main surface of the substrate from the first side to the second side of the main surface with a predetermined space, the second side facing to the first side, the method further has applying cleaning treatment to the main surface of the substrate before forming the resin enclosure.